

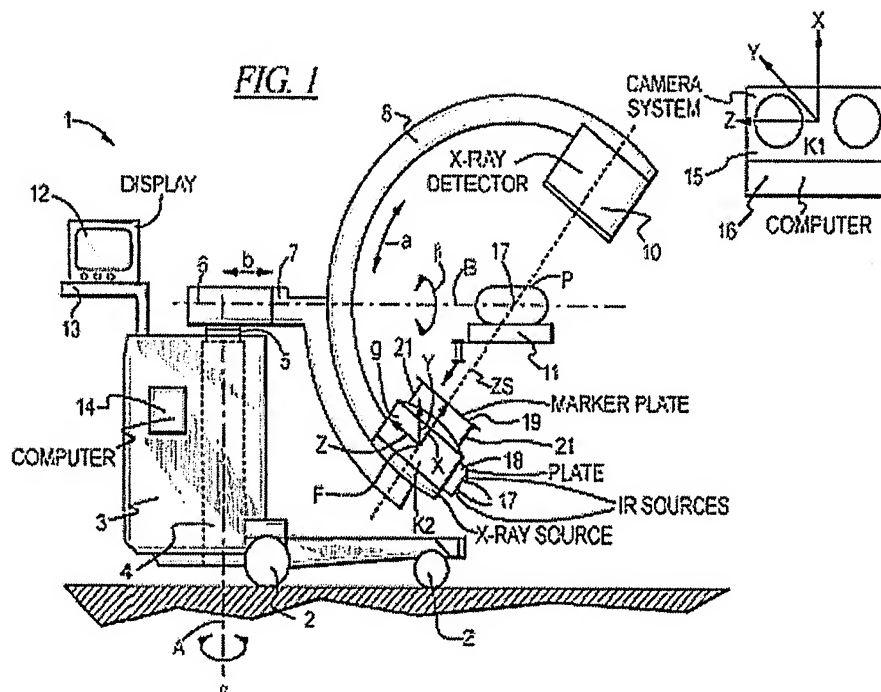
REMARKS

Claims 1-5 and 9-20 are currently pending in the present application. Claims 14-20 have been added. No new matter is added by the amendments.

Claims 6-8 were rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants respectfully disagree and assert that one of ordinary skill in the art would be capable of making and using the invention based on the written description. However, this rejection is moot as claims 6-8 have been cancelled.

Claims 1, 6, 7, 9-11 and 13 were rejected under 35 U.S.C. 102(b) as being anticipated by Schuetz. In particular, the Office Action asserts that the X-ray positive spherical marks of the marking plate in Schuetz read on the claimed marking elements and the post-imaging processing step of removing the X-ray positive spherical marks from the image reads on the claimed marking elements that are not visibly evident individually in the X-ray image. This rejection is moot as to claims 6 and 7, which have been cancelled. Applicants respectfully disagree with the Office Action's assertions.

Schuetz fails to disclose a number of the claimed features. For example, claim 1 includes the steps of providing a pattern of marking elements that are not visibly evident individually in the image and attaching the pattern of marking elements to the object that is being imaged. Claim 9 includes the feature of at least one marking device for attachment to an object in order to determine the position of the object in an X-ray image. The X-ray positive spherical marks 20 of Schuetz are incorporated into a marker plate 19 that is connected to the X-ray source 9 as shown in FIG. 1:



Schuetz does not disclose or suggest the features of claim 1 of providing a pattern of marking elements that are not visibly evident individually in the image and attaching the pattern of marking elements to the object that is being imaged or the features of claim 9 of at least one marking device for attachment to an object in order to determine the position of the object in an X-ray image. The X-ray positive spherical marks 20 of the marker plate 19 are attached to the X-ray source and are remote from the patient P, the bed 11, or any other object that would appear in the image. Moreover, the marker plate 19 in Schuetz, which is remote from any object being imaged, is made from an X-ray permeable material such as plexiglass so that it does not appear in the image.

Claims 10-11 and 13, as well as claims 14-20, depend from claims 1 and 9, respectively and thus are also patentable over Schuetz. Moreover, newly added claims 14 and 15 include the pattern of marking elements and the marking device being remote from the X-ray detector and the X-ray source. Applicants respectfully point out that Schuetz connects the marking plate to the X-ray source.

Claims 2 and 3 were rejected under 35 U.S.C. 103 as being obvious over Schuetz in view of Seeley. Claims 2 and 3 depend from claim 1 and include the steps of providing a pattern of marking elements that are not visibly evident individually in the image and attaching the pattern of marking elements to the object that is being imaged. As described above Schuetz, fails to disclose or suggest this feature. Seeley is directed to fluoroscopic marking and also fails to disclose or suggest providing a pattern of marking elements that are not visibly evident individually in the image and attaching the pattern of marking elements to the object that is being imaged.

Claim 4 was rejected under 35 U.S.C. 103 as being obvious over Schuetz in view of Simon. Claim 4 depends from claim 1 and includes the steps of providing a pattern of marking elements that are not visibly evident individually in the image and attaching the pattern of marking elements to the object that is being imaged. As described above Schuetz, fails to disclose or suggest this feature. Simon is directed to removal of opaque or semi-transparent calibration markers and also fails to disclose or suggest providing a pattern of marking elements that are not visibly evident individually in the image and attaching the pattern of marking elements to the object that is being imaged.

Claim 5 was rejected under 35 U.S.C. 103 as being obvious over Schuetz in view of Erbel. Claim 5 depends from claim 1 and includes the steps of providing a pattern of marking elements that are not visibly evident individually in the image and attaching the pattern of marking elements to the object that is being imaged. As described above Schuetz, fails to disclose or suggest this feature. Erbel is directed to updating a radiotherapy plan based on the results of an already existing plan and also fails to disclose or suggest providing a pattern of marking elements that are not visibly evident individually in the image and attaching the pattern of marking elements to the object that is being imaged.

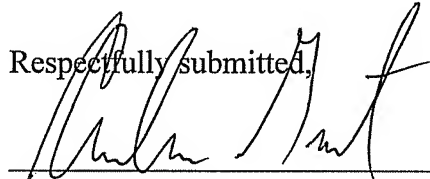
Claims 8 and 12 were rejected under 35 U.S.C. 103 as being obvious over Schuetz in view of Close. This rejection is moot as to claim 8, which has been cancelled. Claim 12 depends from claim 9 and includes the feature of at least one marking device for attachment to an object in order to determine the position of the object in an X-ray image. As described above Schuetz, fails to disclose or suggest this feature. Erbel is directed to a regularization technique for densometric correction and also fails to disclose or suggest the feature of at least one marking device for attachment to an object in order to determine the position of the object in an X-ray image.

In view of the foregoing, Applicants respectfully submit that the specification, the drawings and all claims presented in this application are currently in condition for allowance. Accordingly, Applicants respectfully request favorable consideration and that this application be passed to allowance.

Should any changes to the claims and/or specification be deemed necessary to place the application in condition for allowance, the Examiner is respectfully requested to contact the undersigned to discuss the same.

Dated: 2/1/08

Respectfully submitted,



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